

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: NEO-RAY

Report Number: P334807

Luminaire Tested: **S124IP-S810U927-4F0-1E-UDD-4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P334807
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124IP-S810U927-4F0-1E-UDD-4
Description: DEFINE 4 INDIRECT LED LUMINAIRE, BATWING OPTIC
PENDANT MOUNT, 810 LUMENS PER FOOT
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

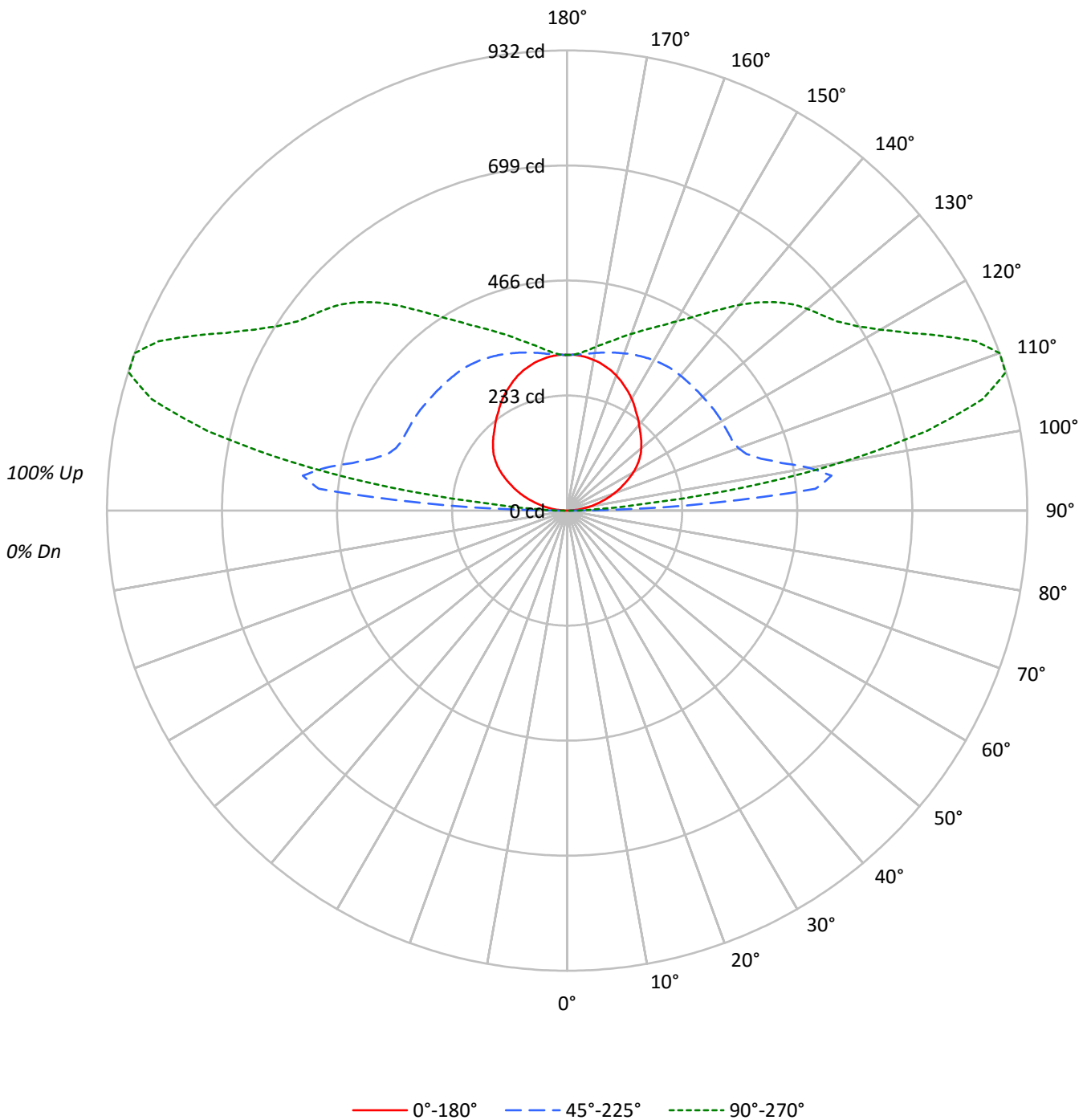
Lumens per Lamp: N/A
Luminaire Lumens: 2297.5 lumens
Efficiency: N/A
Efficacy: 87.0 lumens/watt
Spacing Criteria (0/90/45): - / - / -
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Indirect

Input Watts (W): 26.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	95	95	95	95	81	81	81	81	56	56	56	32	32	32	10	10	10	0
1	87	83	79	76	74	71	68	65	48	47	45	28	27	26	9	9	8	0
2	79	72	66	62	67	62	57	53	42	40	37	24	23	22	8	7	7	0
3	72	63	56	51	61	54	49	44	37	34	31	21	20	18	7	6	6	0
4	65	56	48	43	56	48	42	37	33	29	26	19	17	16	6	6	5	0
5	60	49	42	36	51	42	36	32	29	25	22	17	15	13	5	5	4	0
6	55	44	36	31	47	38	32	27	26	22	19	15	13	11	5	4	4	0
7	50	39	32	27	43	34	28	23	23	19	17	14	11	10	4	4	3	0
8	47	35	28	23	40	30	24	20	21	17	14	12	10	9	4	3	3	0
9	43	32	25	20	37	27	22	18	19	15	13	11	9	8	4	3	3	0
10	40	29	22	18	34	25	19	16	17	14	11	10	8	7	3	3	2	0

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	0	0	0
5°	0	0	0
10°	0	0	0
15°	0	0	0
20°	0	0	0
25°	0	0	0
30°	0	0	0
35°	0	0	0
40°	0	0	0
45°	0	0	0
50°	0	0	0
55°	0	0	0
60°	0	0	0
65°	0	0	0
70°	0	0	0
75°	0	0	0
80°	0	0	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	0.0	0.0
10°-20°	0.0	0.0
20°-30°	0.0	0.0
30°-40°	0.0	0.0
40°-50°	0.0	0.0
50°-60°	0.0	0.0
60°-70°	0.0	0.0
70°-80°	0.0	0.0
80°-90°	1.2	0.1
90°-100°	228.5	9.9
100°-110°	477.1	20.8
110°-120°	424.1	18.5
120°-130°	357.0	15.5
130°-140°	297.8	13.0
140°-150°	227.4	9.9
150°-160°	159.9	7.0
160°-170°	94.0	4.1
170°-180°	30.6	1.3
0°-30°	0.0	0.0
0°-40°	0.0	0.0
0°-60°	0.0	0.0
0°-90°	1.2	0.1
90°-120°	1129.6	49.2
90°-150°	2011.8	87.6
90°-180°	2296.0	99.9
0°-180°	2297.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	0	0	0	0	0	
5°	0	0	0	0	0	0
15°	0	0	0	0	0	0
25°	0	0	0	0	0	0
35°	0	0	0	0	0	0
45°	0	0	0	0	0	0
55°	0	0	0	0	0	0
65°	0	0	0	0	0	0
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	1	5	11	12	13	1
95°	20	64	505	250	151	22
105°	72	105	406	875	872	77
115°	128	160	362	696	837	127
125°	178	211	360	592	668	158
135°	211	251	357	526	597	163
145°	243	279	356	444	488	153
155°	277	299	346	392	408	128
165°	302	311	331	351	356	85
175°	315	315	318	322	321	30
180°	315	315	315	315	315	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.6	1.9	3.7	4.3	5.0	5.0	8.7	8.7	9.9	11.1	10.5
92.5°	8.7	12.4	19.2	28.5	39.6	55.7	94.2	154.2	212.5	242.8	201.9
95°	20.4	22.3	28.5	36.5	51.4	77.4	131.3	232.9	380.9	504.8	519.1
97.5°	34.1	34.1	39.6	47.1	60.1	82.4	125.1	212.5	364.8	540.1	651.0
100°	47.1	47.1	51.4	58.8	70.6	90.4	127.0	197.0	323.3	498.0	656.6
102.5°	59.5	60.7	64.4	71.2	82.4	101.0	133.2	192.6	295.5	445.4	610.1
105°	72.5	74.3	77.4	84.9	96.0	114.0	143.7	195.1	281.8	406.3	551.9
107.5°	86.7	88.0	91.1	99.1	109.6	127.6	154.9	202.6	278.1	380.9	504.2
110°	101.0	102.2	105.3	112.7	123.9	140.6	167.9	211.2	279.4	369.2	470.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	114.6	115.8	119.5	126.4	137.5	154.2	180.3	220.5	283.1	363.6	450.9
115°	127.6	129.5	133.8	140.0	151.8	168.5	193.3	230.4	288.0	362.4	440.4
117.5°	141.2	143.1	146.8	153.6	164.8	182.1	205.6	240.3	293.0	361.7	434.8
120°	154.9	156.1	160.4	167.2	177.8	195.1	218.7	250.9	298.6	361.7	430.5
122.5°	167.2	168.5	172.8	179.0	190.8	207.5	231.0	260.8	304.1	361.1	425.5
125°	177.8	180.3	184.0	190.8	202.6	219.9	242.2	270.7	309.7	360.5	420.0
127.5°	187.7	189.5	193.9	201.3	213.7	231.0	252.7	279.4	314.0	359.3	412.5
130°	195.7	198.2	203.2	212.5	224.2	242.2	263.3	287.4	319.0	358.6	405.7
132.5°	203.8	205.6	212.5	221.1	234.1	250.9	271.9	295.5	323.3	358.0	399.5
135°	211.2	213.7	219.9	230.4	243.4	259.5	280.0	302.3	327.7	357.4	393.3
137.5°	218.7	221.1	227.9	237.9	251.5	267.0	286.2	307.2	330.2	357.4	387.8
140°	226.7	228.6	235.4	245.9	258.9	273.8	292.4	312.2	333.3	356.8	383.4
142.5°	235.4	237.2	243.4	253.3	265.7	280.0	297.9	315.9	335.7	356.8	379.7
145°	243.4	245.3	251.5	260.2	271.9	285.6	301.7	318.4	336.3	355.6	375.4
147.5°	252.7	253.3	258.9	268.2	278.1	290.5	306.0	320.9	337.0	353.7	371.7
150°	261.4	262.0	267.0	274.4	283.7	295.5	309.1	322.7	337.0	351.8	367.3
152.5°	269.4	269.4	274.4	281.2	289.3	299.8	311.6	324.0	335.7	348.7	362.4
155°	276.9	277.5	281.2	287.4	294.2	303.5	314.0	324.6	334.5	345.6	357.4
157.5°	284.3	284.3	288.0	293.0	299.2	306.6	315.9	324.6	333.3	342.5	352.5
160°	291.1	291.1	293.6	297.9	302.9	309.7	317.1	324.6	331.4	338.8	346.9
162.5°	297.3	296.7	298.6	302.3	306.6	311.6	318.4	324.6	329.5	335.1	341.9
165°	301.7	301.7	302.9	306.0	309.1	312.8	318.4	323.3	327.1	331.4	336.3
167.5°	306.6	306.0	306.6	309.1	311.0	314.0	318.4	322.1	324.6	327.7	331.4
170°	309.7	309.1	309.7	311.6	312.8	314.7	317.8	320.9	322.1	324.0	326.4
172.5°	312.8	312.2	312.2	313.4	314.0	315.3	317.1	319.6	319.6	320.2	322.1
175°	314.7	314.0	314.0	314.7	315.3	315.3	316.5	318.4	317.8	317.8	319.0
177.5°	315.9	315.3	314.7	315.3	315.3	315.3	315.9	317.1	315.9	315.9	316.5
180°	315.3	315.3	315.3	315.3	315.3	315.3	315.3	315.3	315.3	315.3	315.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	11.1	11.8	12.4	12.4	13.0	13.6	13.0	13.0
92.5°	149.3	111.5	88.0	72.5	63.2	58.8	56.4	56.4
95°	459.0	363.0	280.0	219.9	189.5	170.3	159.2	151.1
97.5°	660.9	613.2	545.1	475.7	433.6	396.4	377.8	363.0
100°	747.0	759.4	729.1	683.2	629.3	591.6	573.0	568.0
102.5°	742.7	816.4	835.0	822.6	794.7	769.9	750.1	746.4
105°	693.8	800.9	862.2	887.6	888.9	883.9	875.2	871.5
107.5°	633.7	749.5	835.0	887.0	914.3	925.4	930.4	931.0
110°	580.4	687.6	777.4	845.5	889.5	915.5	926.7	932.2



TEST NUMBER: P334807

CATALOG NUMBER: S124IP-S810U927-4F0-1E-UDD-4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	541.4	633.1	716.7	784.8	836.2	869.1	885.8	895.7
115°	517.8	594.0	666.5	726.0	774.9	812.1	831.9	836.8
117.5°	504.2	568.6	627.5	679.5	722.9	755.1	776.1	779.2
120°	495.5	553.1	602.7	646.7	682.0	709.2	725.3	732.2
122.5°	488.1	543.2	587.2	624.4	652.9	675.2	688.2	695.0
125°	479.4	532.7	575.4	609.5	634.3	652.3	664.0	667.7
127.5°	469.5	520.9	563.7	595.9	620.7	636.8	646.7	650.4
130°	457.1	506.1	548.2	581.0	606.4	621.9	631.8	635.5
132.5°	444.1	489.3	530.2	563.1	587.8	605.8	615.1	618.8
135°	432.4	472.6	510.4	541.4	566.2	583.5	593.4	597.1
137.5°	421.2	456.5	489.3	517.8	541.4	559.3	567.4	571.7
140°	411.9	441.0	468.9	494.9	516.6	530.2	538.9	543.9
142.5°	403.2	428.0	450.9	472.6	491.2	503.6	511.0	514.1
145°	395.2	416.3	434.8	452.2	467.7	478.2	484.4	487.5
147.5°	388.4	405.7	421.2	435.5	447.2	456.5	461.5	462.7
150°	382.2	396.4	408.8	420.0	429.9	437.9	441.7	442.3
152.5°	375.4	387.1	398.3	407.0	415.0	421.2	423.1	423.7
155°	368.6	378.5	387.8	395.2	401.4	406.3	408.2	408.2
157.5°	361.1	369.8	377.8	384.0	389.0	392.7	394.0	394.0
160°	354.3	361.1	367.9	372.9	376.6	380.3	380.9	380.9
162.5°	347.5	353.1	358.0	362.4	364.8	368.6	369.2	368.6
165°	341.3	345.0	349.4	352.5	354.9	357.4	356.8	356.2
167.5°	335.1	338.2	341.9	343.8	345.0	346.9	346.9	346.3
170°	329.5	331.4	333.9	335.7	337.0	337.6	337.0	337.0
172.5°	324.6	325.8	327.1	328.3	328.9	329.5	328.9	327.7
175°	320.2	320.9	322.1	322.1	322.1	323.3	322.1	320.9
177.5°	317.1	317.8	317.8	318.4	317.8	318.4	317.1	315.9
180°	315.3	315.3	315.3	315.3	315.3	315.3	315.3	315.3

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